REMARKS

The official action of 20 April 2009 has been carefully considered and reconsideration of the application as amended is respectfully requested.

The courtesy of Examiners Mark Eashoo and Thuy-Ai N. Nguyen in discussing this application with the undersigned in a personal interview on 23 July 2009 is acknowledged with appreciation. The substance of the interview followed the agenda set forth in the Proposed Agenda submitted prior to the interview and is as set in the discussion below in connection with a response to the official action.

Claim 10 has been amended to correspond to the proposed amended claim discussed in the interview and also, at the suggestion of the examiners, to incorporate the molar ratio previously in claim 12 (now canceled). The claims have also been amended to remove the basis for the rejection under 35 USC 112, second paragraph, appearing at page 2 of the official action.

The amendments to the claims draw support from the patent application publication at, for example, paragraphs [0121]-[0122] (molar ratio of reactants in step (b)); paragraph [0081] (mixture formed in step (b) can be dried to form the final product); and paragraph [0120] (mixture comprises byproduct salt in addition to the monoglyceride sulfonate). In addition, Applicants respectfully note that one of skill in the art would understand from paragraphs [0120]-[0122] that it is the byproduct salt that is present in the

claimed amounts of 2-15 wt%. This is *a fortiori* true because the results in Table 6 of paragraph would otherwise not be reproducible.

New claims 14 and 15 have been added more completely to define the subject matter which Applicants regard as their invention. Support for the recitations in these claims appears in the Examples on pages 9-10 of the patent application publication, and in particular the soap of Example 10 containing 8.9 wt% salt, which is described in Table 6 and subjected to a quality analysis test in Test Example 2 (paragraphs [0123] to [0126]). The specification makes clear that an amount of salt greater than 8.9wt% provides the advantageous results described, subject only to eduction of salt and cracking of soap when the molar ratio of the recited reactants exceeds 1:1.2 (see patent application publication at paragraph [0080]) such that one of skill in the art would appreciate from the Examples that, as of the application filing date, Applicants had possession of a soft soap comprising "at least" 8.9wt% of the salt (with the upper limit of the salt content being 1:1.2, as defined in claim 10). See MPEP 2163.02.

Claims 10-12 stand rejected under 35 USC 103(a) as allegedly being unpatentable over Gu Seiken et al as evidenced by "Unabridged Chemical Dictionary". Applicants respectfully traverse this rejection.

The claimed invention is based at least in part upon Applicants' discovery that a soft soap prepared by the claimed method comprising monoglyceride sulfonate and a concentration of salt between 2-15 wt% can offer advantages in, e.g., moisturizing and

cleaning without the disadvantages of the prior art soaps comprising a high salt content. See patent application publication at, e.g., paragraphs [0019]-[0022] and [0127]-[0129]. This is contrary to the accepted wisdom in the art. See patent application publication at [0021] ("That is conventionally, salt has been used to improve manufacturability or physical properties of the soap, rather than to utilize its benefits described above. And, its content has been below 1%. If the salt content becomes large, i.e. if the salt content exceeds 1%, moisture content of the soap decreases and the soap may crack."). Indeed, Applicants have found that, when lauric acid and myristic acid in the fatty acid salt is contained in the soap at an amount of 60 wt% or more, the resultant soap has superior properties, including superior molding and stamping workability, softness and formability, that could not have been expected from the prior art.

The result effective nature of a high salt concentration in a soap manufactured by the claimed process is shown in the examples appearing on pages 9-10 of the patent application publication, wherein it can be seen that the soap prepared according to the claimed process with a salt content of 8.9 wt% performed better in the evaluation described at paragraphs [0123]-[0126] than the soap prepared by the same process but having a salt content of 0.8 wt % (see Table 6 for respective salt contents of the exemplified soaps of Example 3 and Comparative Example 13).

In the office action, the Examiner did not point to any description in the cited primary reference, Gu Seiken, that would teach the manufacture of a soft soap with a high salt concentration as claimed, but contended that the soap formed in Example 1 of the reference

would **inherently** have a molar ratio of fatty acid salt to chlorosulfonic acid within the claimed range. However, as discussed in the interview, Example 1 of Gu Seiken describes a method of preparation of soap by reacting (i) 76.65% of beef tallow sodium, (ii) **previously prepared monoglyceride sulfonate** (6.0% of sodium cocomonoglyceride sulfonate of Example 1 in Gu) and (iii) other things. In contrast, the claimed invention is directed to a method of preparation of a soap comprising monoglyceride sulfonate by reacting a specific equivalent ratio of the fatty acid salt and 3-chloro-2-hydroxypropanesulfonic acid sodium salt to make a soap with a specific (high) content of salt.

In the interview, the Examiner pointed to paragraph [0035] of the reference, which describes a method of making a soap with chlorosulfonates and monoglyceride, but which is not exemplified in the reference. The Examiner requested Applicants comments as to this teaching of the reference.

Applicants have now calculated the molar ratio of the reactants described in this paragraph to be "1:0.0006 to 1:0.40". This ratio overlaps with the molar ratio of the claimed reactants but does not necessarily overlap with the salt content recited in claim 12, and does not overlap with the salt content recited in claims 14-15. (Applicants respectfully note that the molar ratio of the reactants in the reference would not reflect the actual salt content of any soap made by the reference process as the molar ratios do not factor in the weight content of any of the reference additives- -see Gu Seiken at paragraph [0047].) Accordingly, the reference cannot be considered inherently to show the claimed salt content limitations.

Moreover, the reference's disclosed molar ratio of reactants is so broad as to encompass the manufacture of a very large number of distinct compositions and thereby to present a situation analogous to the question of obviousness of a species when the prior art broadly discloses a genus. See MPEP 2144.05(I). In such situation, an analysis as set forth in MPEP 2144.08 would show the following factors that prevent a finding of obviousness for the claimed process (species):

(A) the prior art teaches a prejudice away from a monoglyceride sulfonate soap with a high salt content as claimed (see discussion above);

(B) the working examples of the reference show a completely different process with (only) external addition of salt in an amount of (only) 1.0 wt% and thereby also teaches away from a soap with a high salt content as claimed;

(C) the reference describes a process that produces a huge genus of compositions with respective weight percentages of lauric acid and myristic acid outside the claimed amount in at least most embodiments; and

(D) the reference describes a process that produces a huge genus of soap compositions with a salt content outside of the claimed limits.

In the latter respect (D), Applicants respectfully call the Examiner's attention to Test Example 2 in the specification (discussed above), which shows that a soap prepared by the recited process with a salt content below the claimed limit would not have the advantages of

the claimed process.

Where, as here, the cited art teaches a large genus and a preference away from a claimed species, the reference cannot be considered to render the claimed species obvious. See, *In re Baird*, 16 F.3d at 382-83, 29 USPQ2d at 1552 (Fed. Cir. 1994) (reversing obviousness rejection of species in view of large size of genus and disclosed "optimum" species which differed greatly from and were more complex than the claimed species). This is especially true where, as here, the cited art does not recognize the result effective nature of the salt content in a soap prepared by the recited process. See MPEP 2144.05(II)(B) ("A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.").

With specific respect to claims 14-15, these claims further distinguish from the cited art by virtue of the higher threshold limit of the salt content of soap made by the claimed process.

In view of the above, Applicants respectfully submit that the prior art and all other rejections and objections of record have been overcome and that the application is now in allowable form. An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,

CLIFFORD J. MASS
LADAS & PARRY LLP
26 WEST 61st STREET
NEW YORK, NEW YORK 10023
REG.NO.30086 TEL.NO.(212) 708-1890